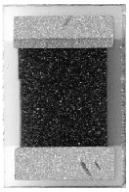
Thin Film 0304 Size Resistor on Alumina



Product may not be to scale

The CC6 series single-value resistor chips offer a small size, low shunt capacitance and solder pad option.
The CC6s nichrome resistor material offers excellent stability.
The CC6s are manufactured using Vishay Electro-Films (EFI) sophisticated thin film equipment and manufacturing technology. The CC6s are 100 % electrically tested and visually inspected to MIL-STD-883.

FEATURES

- Wire bondable
- Chip size: 0.030 x 0.045 inches
- Resistance range: 20 Ω to 59 kΩ
- Alumina substrate
- Low stray capacitance: < 0.2 pF
- Resistor material: Nichrome
- Resistor passivation coat optional
- Tolerances to 0.05 %
- Solder pad optional

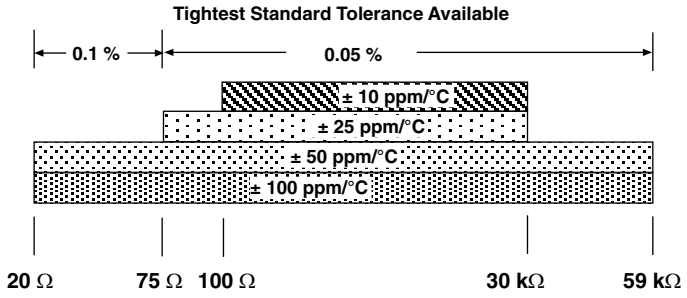
APPLICATIONS

Vishay EFI CC6 chip resistors provide excellent high-frequency response and are ideally suited for prototyping.
Typical application areas are:

- Amplifiers
- Oscillators
- Attenuators
- Couplers
- Filters

Recommended for hermetic applications where die is not exposed to moisture.

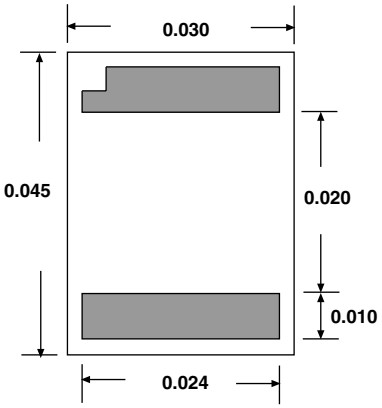
TEMPERATURE COEFFICIENT OF RESISTANCE, VALUES AND TOLERANCES



STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	
Noise, MIL-STD-202, Method 308	- 20 dB typ.
Moisture Resistance, MIL-STD-202 Method 106 - Hermetic Applications	± 0.2 % max. $\Delta R/R$
Stability, 1000 h, + 125 °C, 65 mW	± 0.1 % max. $\Delta R/R$
Operating Temperature Range	- 55 °C to + 125 °C
Thermal Shock, MIL-STD-202, Method 107, Test Condition F	± 0.25 % max. $\Delta R/R$
High Temperature Exposure, + 150 °C, 100 h	± 0.1 % max. $\Delta R/R$
Dielectric Voltage Breakdown	400 V
Insulation Resistance	10^{12} min.
Operating Voltage	100 V max.
DC Power Rating at + 125 °C (Derated to Zero at + 150 °C)	65 mW max.
5 x Rated Power Short-Time Overload, + 25 °C, 5 s	± 0.25 % max. $\Delta R/R$

DIMENSIONS in inches



SCHEMATIC

MECHANICAL SPECIFICATIONS in inches	
PARAMETER	
Chip Size	0.030 x 0.045 ± 0.003 (0.762 x 1.143 ± 0.076 mm)
Chip Thickness	0.010 ± 0.002 (0.25 ± 0.05 mm)
Chip Substrate Material	99.6 % alumina, 2 - 4 microinch finish
Resistor Material	Nichrome
Bonding Pad Size	0.010 x 0.024 (0.254 x 0.61 mm) minimum
Number of Pads	2
Pad Material	25 kÅ minimum gold standard
Backing	None

Options: Terminations: Aluminum, nickel solder (62/32)
Gold back for solder die attach
Contact Applications Engineer

ORDERING INFORMATION

Example: 100 % visual, 50 Ω, ± 10 %, ± 50 ppm/°C TCR, gold terminations

W	**CC6**	**5000**	**B**	**K**	**D**	**G**
INSPECTION/ PACKAGING	PRODUCT FAMILY	RESISTANCE VALUE	MULTIPLIER CODE	TOLERANCE CODE	TCR	TERMINATIONS
W = 100 % visually inspected parts in matrix tray per MIL-STD-883 X = Sample, commercial visually inspected parts loaded in matrix trays (4 % AQL)		Use first 4 or 5 significant digits of resistance	**B** = 0.01 **A** = 0.1 **0** = 1 **1** = 10 **2** = 100	**A** = 0.05 %* **B** = 0.1 %* **C** = 0.25 %* **D** = 0.5 % **F** = 1.0 % **G** = 2.0 % **J** = 5.0 % **K** = 10 % *Coating standard	**A** = ± 10 ppm/°C **B** = ± 25 ppm/°C **D** = ± 50 ppm/°C **E** = ± 100 ppm/°C	**G** = Gold **S** = Solder

Disclaimer

All product specifications and data are subject to change without notice.

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